

## REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

### **Status of Claims:**

No claims are currently being cancelled.

Claim 21 is currently being amended.

Claims 23-25 are currently being added.

This amendment and reply amends and adds claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending and adding the claims as set forth above, claims 1-3 and 5-25 are pending in this application.

### **Indication of Allowable Subject Matter:**

Applicants appreciate the indication of allowable subject matter made in the Office Action with respect to claim 21. Please note that new claims 23-25 include the subject matter of claim 21 and its intervening claim 5, and thus those claims should at the very least also include allowable subject matter.

### **Claim Objections:**

In the Office Action, claim 21 was objected to because of an informality noted on page 2 of the Office Action. By way of this amendment and reply, claim 21 has been amended to correct that informality.

**Claim Rejections – Prior Art:**

In the Office Action, claims 1-3, 5 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 1 179 811 to Arrieta in view of U.S. Patent No. 6,704,608 to Azuma; claims 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Arrieta in view of Azuma and further in view of U.S. Patent Publication No. 2003/0136851 to Habara et al.; claims 8 and 11-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Azuma; claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Habara et al. in view of Azuma; claims 13-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,547,151 to Baldi in view of U.S. Patent Publication No. 2002/0135481 to Conwell; and claims 16, 17, 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2004/0060978 to Okamoto et al. These rejections are traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

With respect to the rejection of claim 1 over the combination of Arrieta and Azuma, the Office Action correctly recognizes that Arrieta does not teach or suggest a memory circuit that is protected from access by an unauthorized reader; however, the Office Action incorrect asserts that Azuma teaches these features.

Azuma discloses a contactless smart card (IC card) with crypto-based mutual authentication. The IC card includes a nonvolatile memory 13 and an encryption circuit 11. The Office Action asserts that Azuma teaches mutual authentication for increased security, and incorrectly interprets this to include protecting access from an unauthorized reader. The mutual authentication for increased security, as taught by Azuma, does not stop physical tampering of the smart card by someone. When an unauthorized user of Azuma's smart card tries to use that card for making a credit card purchase, for example, the unauthorized user presumably will not be able to provide information that is used in the mutual authentication procedure of Azuma; however, this has nothing to do with indicating when physical tampering (e.g., trying to replace a magnetic strip of the smart card with another magnetic strip) of the smart card has occurred.

It is also noted that Arrieta, which is directed to producing a security document having a hologram, and Azuma, which is directed to providing an IC card with a nonvolatile memory and an encryption circuit for providing mutual authentication, are directed to much different purposes. Thus, one skilled in the art at the time the invention was made would not be motivated to combine these two references. However, even if one skilled in the art would be motivated to combine these references, as explained above, that combination would not be relevant to the features recited in claim 1.

Furthermore, the Office Action asserts that “the Examiner interprets the hologram to broadly be interpreted as a tamper evident strip.” However, this cannot be the case, since a hologram does not correspond to a ‘strip’ in any reasonable interpretation of that word.

Accordingly, presently pending independent claim 1 is patentable over the combination of Arrieta and Azuma.

With respect to the rejection of dependent claims 6 and 7 based on the combination of Arrieta, Azuma and Habara et al., since Habara et al. does not rectify the above-mentioned deficiencies of Arrieta and Azuma, claims 6 and 7 are patentable over the combination of those three references.

With respect to the rejection of claims 8, 11 and 12 based on Azuma, the Office Action asserts that Azuma discloses writing second information to one or more memory circuits configured to be read wirelessly for attachment to or incorporation within the printed document. Applicants respectfully disagree. Azuma’s smart card does not correspond to a ‘printed’ document, since there is no printing to be done on a surface of the smart card. As such, the one or more memory circuits provided in Azuma’s smart card are not attached to or incorporated into a printed document, since they are a part of an integrated circuit, also referred to as a smart card. Azuma’s memory circuit 13, which is asserted in the Office Action as corresponding to a memory circuit that is attached to or incorporated in a printed document, is provided in the one-chip IC, as clearly seen in Figure 2 of Azuma. A one-chip IC does not correspond to a printed document.

Accordingly, claim 8 is patentable over the teachings of Azuma.

With respect to the assertions made on page 5 of the Office Action for claims 11 and 12, Applicants strongly disagree with the assertions that it is conventional to attach circuits in/on the card/document as is conventional in the art to store information. The fact that a smart card has memory circuits provided therein, is not pertinent to claims 11 and 12, since the smart card is not a printed document (nothing is being printed on a surface of the smart card), but rather it is a device that may allow printing onto another document.

Accordingly, claims 11 and 12 are patentable over the teachings of Azuma.

With respect to the rejection of claims 9 and 10 based on the combined teachings of Habara et al. and Azuma, paragraph 0052 of Habara et al., which teaches that a guard checks printed information on a card body 60 of an ID 6, to determine if a holder of the ID 6 is authorized to enter a building, is not pertinent to the features recited in claims 11 and 12, since the data printed on the card body 60 of the ID 6 of Habara et al. does not correspond to wirelessly powering a memory circuit on the ID 6 and wireless reading protected information stored in the memory circuit. Rather, a guard visually checks information obtained from the ID 6 (and displayed on a display accessible by the guard) with information obtained from a visual inspection of the holder of the ID 6, to see if the holder of the ID 6 is the correct person who was previously issued the ID 6.

Since Azuma does not rectify the above-mentioned shortcomings of Habara et al., claims 9 and 10 are patentable over the combination of those two references.

With respect to the rejection of claims 13-15 over the combined teachings of Baldi and Conwell, Baldi discloses a provision of a banknote with an embedded RFID chip. Baldi discloses that information provided into the RFID chip may be encrypted, and only made available if a read password is provided. Baldi does not teach or suggest that either (let alone both) printed data or data in the RFID chip identifies a document bearer; rather, it states that the information in the RFID chip identifies the value of the note, the serial number of the note, the issuer of the note, and the date of issuance (see Abstract of Baldi). Baldi also does not teach or suggest that the RFID chip can be physically protected against modification; rather, all that is suggested in the way of physical protection is protection against moisture.

Baldi also assumes that use of write-once hardware and encryption of data will provide a complete solution to malicious use (see columns 5 and 6 of Baldi), and thus there is no motivation to incorporate other forms of physical protection to the currency note of Baldi.

Conwell teaches the construction of a tamper-evident “smart label”, where a smart label is a label containing an RFID tag (generally containing a tracking reference). As explained above, there is no motivation to combine the teaching of Conwell with those of Baldi, since: a) Baldi states that his system is a ‘complete solution to malicious use’, and b) providing tamper evident ‘smart labels’ to the currency note of Baldi might make Baldi’s currency note unacceptable as a negotiable instrument (e.g., cuts in the currency note may make it invalid).

Accordingly, since Baldi cannot be combined with Conwell, and since the purported combination (assuming for argument sake that they could be combined) does not teach or suggest the features recited in claims 13-15, those claims are patentable over the cited art of record.

With respect to the rejection of claims 16, 17, 19 and 20 over Okamoto, that reference teaches the use of a memory chip (which in some embodiments can be an RFID-like chip) to store an encrypted form of an image of a document. The Office Action asserts that Okamoto teaches that the image data and hence encrypted data can relate to a bearer of a document, but this assertion is clearly not borne out by the passages of Okamoto cited in the Office Action. The assertion in the Office Action that since Okamoto discloses that the document can be a gift certificate, and thus “it would have been obvious that for at least mail of a gift certificate, that printed information would include a name”, is incorrect, since a gift certificate typically only identifies the store for which the gift certificate can be used and the amount of the gift certificate. For those same reasons, a gift certificate would not include the bearer’s name, since that would make the gift certificate difficult to ‘re-gift’, and as such make it less useful and less “sellable” to the public.

Furthermore, physical isolation of the memory chip is not taught or suggested by Okamoto, and certainly not by the passages of Okamoto cited in the Office Action.

Accordingly, claims 16, 17, 19 and 20 are patentable over Okamoto.

**New Claims:**

New claims 22-25 have been added, whereby new claims 23-25 are believed to include allowable subject matter for the same reasons as indicated in the Office Action with respect to claim 21. New claim 22 recites that the memory circuit includes tamper resistance means for resisting tampering of the memory circuit. This is clearly different from the hologram as disclosed in Arrieta.

**Conclusion:**

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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